# ROYAL ASTRONOMICAL SOCIETY.

Vol. VIII. *April* 14, 1848. No. 6.


Capt. W. H. Smyth, R.N., Vice-President, in the Chair.

Richard Hodgson, Esq., Evesley, near Hartford Bridge, Hants; Wm. Assheton Cross, Esq., Redscar, near Preston, Lancashire; and Wm. Henry Palmer, Esq., 24 Bedford Row, were balloted for and duly elected Fellows of the Society.

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## FLORA.

*Observations.*

Cambridge. (Professor Challis.)

| 1847. | Greenwich M.T. h m s | R.A. h m s | N.PD. ° ′ ″ | |
|---|---|---|---|---|
| Nov. 23 | 12 35 54·0 | 4 45 42·12 | 76 8 49·8 | Meridian. |
| 29 | 12 5 47·5 | 39 9·97 | 76 1 8·7 | — |
| Dec. 1 | 11 55 42·0 | 36 55·99 | 75 57 44·9 | — |
| 7 | 11 25 30·2 | | 44 59·0 | — |
| 11 | 12 2 5·6 | 26 4·39 | 34 5·0 | Nor$^{d}$. Equat$^{l}$. |
| 14 | 10 50 51·2 | 4 23 9·72 | 75 24 58·9 | Meridian. |

No correction has been applied for parallax. The reference star on December 11 was B.A.C. 1409, the place of which is taken from the Catalogue. The number of comparisons was six.

*Elements.* By W. W. Boreham, Esq.

From observations on Oct. 18, Nov. 9, and Dec. 5, 1847; all the small corrections having been taken into account.

Epoch 1848, January 0,0, G.M.T.

| | | |
|---|---|---|
| Mean Anomaly ... | 35 42 7″·64 | |
| $\varpi$ ..... | 32 42 8·36 | Mean Eq. 1847·0. |
| $\Omega$ ..... | 110 19 0·04 | |
| $i$ ..... | 5 52 43·73 | |
| $\varphi$ ..... | 9 2 33·33 | |
| Log $a$ ..... | 0·3427149 | |
| $\mu$ ..... | 1086″·2613 | |

## IRIS.

*Observations.*

CAMBRIDGE. Northumberland Equatoreal. (Prof. Challis.)

| 1847. | Greenwich M.T. h m s | R.A. h m s | N.P.D. ° ′ ″ | No. of Comp. R.A. | No. of Comp. N.P.D. | Star. |
|---|---|---|---|---|---|---|
| Dec. 8 | 5 43 1·6 | 21 23 13·93 | 100 10 22·3 | 6 | 4 | Bessel xxi. 546 |
| 13 | 5 13 16·8 | 21 32 42·46 | 99 30 36·3 | 3 | 3 | B.A.C. 7562 |
| 1848. | | | | | | |
| Jan. 27 | 6 36 26·5 | 23 4 58·84 | 91 38 53·2 | 2 | 1 | Bessel xxiii. 78 |
| Feb. 1 | 7 11 7·1 | 15 52·95 | 90 36 7·8 | 4 | 3 | B.A.C. 8152 |
| 2 | 6 49 24·5 | 18 1·45 | 90 23 30·0 | 9 | 9 | — — |
| 17 | 6 56 12·9 | 23 51 14·21 | 87 8 8·8 | 5 | 5 | Bessel xxiii. 1004 |

"No correction has been applied for parallax. The places of the stars are adopted from the cited catalogues. A comparison of the observation of Feb. 17 with the place of the planet computed approximately from Professor Goldschmidt's elements, in No. 615 of the *Astronomische Nachrichten*, gave the following result:—

Cal$^{d}$ R.A. − Obs$^{d}$ R.A. = + 2$^{s}$·9 Cal$^{d}$ N.P.D. − Obs$^{d}$ N.P.D. = −0″·3

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## NEPTUNE.

*Observations.*

CAMBRIDGE. On the Meridian. (Professor Challis.)

| 1847. | Greenwich M.T. h m s | R.A. h m s | Obs$^{d}$—Cal$^{d}$ s | N.P.D. ° ′ ″ | Obs$^{d}$—Cal$^{d}$ ″ |
|---|---|---|---|---|---|
| Nov. 23 | 5 51 30·6 | 22 0 12·30 | −0·75 | 102 51 16·3 | +5·7 |
| 24 | 5 47 36·6 | 0 14·24 | 0·73 | 51 4·2 | 4·7 |
| 29 | 5 28 8·7 | 0 25·91 | 0·66 | 49 56·5 | 2·4 |
| Dec. 1 | 5 20 22·3 | 0 31·28 | 0·83 | 49 26·5 | 3·5 |
| 6 | 5 0 58·8 | 0 47·42 | 0·75 | 47 57·0 | 3·4 |
| 8 | 4 53 14·5 | 0 54·92 | 0·54 | 47 16·0 | 1·8 |
| 13 | 4 33 54·8 | 22 1 14·81 | −1·04 | 102 45 23·3 | +2·7 |

With the Northumberland Equatoreal.

| 1848. | Greenwich M.T. h m s | R.A. h m s | Obs$^{d}$—Calc$^{d}$ s | N.P.D. ° ′ ″ | Obs$^{d}$—Cal$^{d}$ ″ | No. of Comp. |
|---|---|---|---|---|---|---|
| Jan. 12 | 5 30 42·9 | 22 4 14·17 | −0·73 | 102 29 5·8 | +5·3 | 4 |
| 15 | 6 9 56·8 | 4 36·95 | 0·44 | 27 0·0 | +2·2 | 6 |
| 27 | 5 53 51·2 | 22 6 11·43 | −0·63 | 102 18 21·4 | −0·2 | 3 |

The reference star in all the equatoreal observations was $e^{2}$ *Aquarii*, the place of which is adopted from the British Association Catalogue. The parallax 0″·28 has been taken into account.

## MAUVAIS' COMET.

STARFIELD. 20-foot Equatoreal. (Mr. Lassell.)

| 1848. | Greenwich M.T. | R.A. Comet—Star. | N.P.D. Comet—Star. | No. Obs. | Star Compared. |
|---|---|---|---|---|---|
| | h m s | m s | ′ ″ | | |
| March 3 | 10 2 24 | −0 9·48 | | 9 | H. C. 21083 |
| | 11 57 51 | | +4 11·8 | 5 | — |
| 19 | 10 9 25 | +0 4·00 | | 8 | *a* |
| | 9 45 26 | | +3 3·3 | 6 | — |
| 24 | 10 15 42 | −0 6·44 | | 10 | B. Z. 280<br>R.A. 10h 6m 27s |
| | 9 35 27 | | +3 50·7 | 8 | — |
| 29 | ..... | Sky became hazy. | | | *b* |
| | 10 45 4 | | +4 18·3 | 4 | — |
| 31 | 9 52 16 | −0 2·88 | | 9 | *c* |
| | 9 15 30 | | −0 33·7 | 7 | — |
| April 1 | ..... | Clouded up. | | | H. C. 19600 = B. ix. 1172 |
| | 11 31 10 | | +1 15·8 | 4 | — |
| 3 | 9 38 14 | −1 5·60 | | 5 | B. ix. 1176 |
| | 9 7 29 | | +3 23·2 | 5 | — |

"The results of observation are stated without any correction."

Mr. Lassell remarks that he "changed the mirror in the course of these observations, but the micrometer readings are reduced by the appropriate value. The micrometer is by Merz, with illuminated threads; powers 219 and 297."

"On March 31st, a faint nebula (R.A. 9h 58m 44s, N.P.D. 74° 53′ approx.) was almost in the field with the comet; and I estimated the comet at about half the brightness of the nebula. The comet appears to have a *very minute* stellar nucleus surrounded by nebulosity. When last seen, the comet had become a faint object, yet I think it may possibly be visible when the moon has retired."

"The observations of the 19th March were made during the total lunar eclipse; and as a very small quantity of light is sufficient to obliterate this comet, it may be inferred that the moon's disk had not, at this place, any *very* extraordinary brightness. It did not appear to me brighter than might be accounted for by its not passing centrally through the shadow."

The approximate places of Mr. Lassell's stars of comparison are subjoined, in the hope that their correct positions may be determined immediately.

### *Approximate Mean Places of Stars*, 1848·0.

| | Mag. | h m s | ° ′ ″ | |
|---|---|---|---|---|
| H. C. 21083 | 8 | 10 50 55·5 | 71 27 52 | A star of the 9 mag. follows in 3″·5, and is 4′ to the north. |
| *a* | 10 | 10 16 10 | 73 14 | |
| B. Z. 280 | 8·7 | 10 7 46·8 | 73 50 57 | |
| *b* | 8·9 | 9 59 20 | 74 29 | |
| *c* | 8·9 | 9 58 20 | 74 49 | |
| H. C. 19600<br>Bessel ix. 1172 | 8·9 | 9 54 22·2 | 74 55 49 | |
| —— 1176 | 8·9 | 9 54 40·7 | 75 8 15 | |

CAMBRIDGE. Northumberland Equatoreal. (Prof. Challis).

| 1847. | Greenwich M.T. h m s | R.A. h m s | N.P.D. ° ′ ″ | No. of Comp. | Star. |
|---|---|---|---|---|---|
| March 31 | 10 19 20·0 | 9 57 22·76 | 74 48 48·8 | 5 | H.C. 19600 |
| April 1 | 10 15 48·3 | 56 4·20 | 74 56 52·3 | 3 | — — |
| 3 | 10 33 1·4 | 53 34·64 | 75 12 9·1 | 5 | H.C. 19572 |
| 6 | 10 56 46·9 | 9 50 6·12 | 75 35 38·4 | 6 | Bessel ix. 1074 |

"These observations, as well as those of March 3 and 7, already communicated (see *Monthly Notice*, vol. viii. No. 5), were made by taking angles of position and distances with a double-bar micrometer, the stars of immediate reference being (excepting on April 6), minute stars in the neighbourhood of the comet, which were afterwards compared with the reference-stars mentioned above. The power employed was 120 or 160. On account of the faintness of the object no illumination whatever could be used in addition to that afforded by the luminosity of the atmosphere, which, prevailing as it usually does about the time of the vernal equinox, made the micrometer bars sufficiently visible, and almost overpowered the comet.

The following mean positions of the stars used in the foregoing and the previous observations have been obtained by meridian observations, commencing on March 13:—

| Star. | | Mean R.A. 1848,0. h m s | Mean N.P.D. 1848,0. ° ′ ″ |
|---|---|---|---|
| H.C. | 21083 | 10 50 54·97 | 71 27 53·1 |
| — | 20827 | 10 41 19·27 | 72 3 3·2 |
| — | 19600 | 9 54 21·90 | 74 55 44·1 |
| — | 19572 | 9 53 8·82 | 75 20 40·6 |
| Bessel ix. | 1074 | 9 49 39·60 | 75 40 18·9 |

The three last positions have been adopted in the places here given. If the two first be used, and a corrected value of the micrometer revolution, obtained April 4, be employed, the corrections to the observations of March 3 and 7 will be respectively $-0^s{\cdot}31$, and $-0^s{\cdot}25$ in right ascension, and $-1''{\cdot}4$ and $+3''{\cdot}0$ in north polar distance. No account has been taken of parallax. All the places of the comet were obtained with great care, and I consider them entitled to confidence."

SOUTH VILLA. Equatoreal. (Messrs. Bishop and Hind.)

| 1848. | Greenwich M.T. h m s | R.A. ° ′ ″ | Dec. ° ′ ″ |
|---|---|---|---|
| April 2 | 11 22 35 | 148 41 37 + 0·35 $p$ | + 14 54 53 + 0·62 $p$ |

Mr. Slatter, of Rose Hill, near Oxford, communicated an account of the solar halo and parhelia which were observed so extensively on March 29 last, together with an explanatory sketch of the phenomenon as it appeared at his station.

Mr. Slatter also furnishes accounts of the auroræ which appeared on the night of the lunar eclipse (March 19 of the present year), and on the night of October 24 of the year 1847. His object is

principally to shew, by a comparison of the observations of the aurora which were made at Cambridge, at Stowe, and at Rose Hill, that the phenomenon exists within the limits of the earth's atmosphere, and is modified and perhaps partly produced by the state of vapour existing in the atmosphere at the time. The observations, he observes, are irreconcilable, on the supposition of their representing the *same phase* of the phenomena at the same time; but that they "suggest the notion of a wave of vapour driven across the country by a westerly wind, visiting each station in succession, and exhibiting the same details at each in succession."

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Mr. Drach suggests that certain facts, which may be of use to shipwrecked mariners, should be printed or engraved upon articles likely to be preserved. He has furnished a specimen for the dial-plate and case of a watch, on which short tables of the equation of time, of the sun's declination, and of the acceleration, are inscribed.

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## SPECIAL GENERAL MEETING.

A Special General Meeting was holden after the business of the ordinary Meeting was concluded, agreeably to the Bye-laws (Sec. iv. § 9), to consider the following Resolutions, which were proposed on the part of the Council; Capt. W. H. Smyth, in the Chair:—

1. The election of the following persons as Honorary Members of the Society:—
   His Majesty the King of Denmark, in acknowledgment of the services of his predecessors.
   His Grace the Duke of Northumberland, in acknowledgment of his defraying the expense of Sir J. F. W. Herschel's work.
   Baron von Senftenberg, in acknowledgment of his foundation and maintenance of an active and useful Observatory.
2. The expulsion from the Society of Edward Jordan Graeff, Esq., William Hill, Esq., Rev. J. Michell, Thomas G. Western, Esq., Rev. William Fletcher, Captain J. Forbes, Ebenezer Henderson, Esq., Rev. Dionysius Lardner, LL.D., and J. B. Duncan, Esq., unless the arrears due by them to the Society be paid up.

The three persons above mentioned were unanimously elected (by show of hands) Honorary Members of the Society.

It having been ascertained at the commencement of the Meeting, that twenty-four Fellows were present, a ballot was taken upon each of the names mentioned in the second resolution; at the close of which the Chairman announced that the nine Fellows in question were severally expelled from the Society.

## NEW PLANET,

*Discovered at Mr. Cooper's Observatory, Markree Castle, Sligo,* by Mr. A. Graham.

*Extract of a Letter from Mr. Graham.*

"In following up a class of observations recommended by Mr. Cooper I discovered a planet; the following observations are all that have been made at Markree up to the present time:—

| Greenwich M.T. 1848. | R.A. h m s | Dec. ° ′ ″ | |
|---|---|---|---|
| April 25·541 | 14 56 38 | −12 35 | Rough, from Map. |
| 26·472888 | 55 34·63 | 31 47·5 | Equat. Microm. |
| 26·547714 | 55 29·94 | 31 37·9 | Mer. Circle. |
| 26·596244 | 55 27·15 | 31 28·1 | Equat. Microm. |
| 27·440 | 54 33 | 29 | Rough Reading. |
| 28·441448 | 14 53 37·60 | −12 26 36·3 | Equat. Microm. |

"A. Graham.

"*Markree Observatory, April 29.*"

In a previous letter, April 27th, Mr. Graham announced his discovery, and estimated the planet at about the 10th magnitude.

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## NEW STAR IN OPHIUCHUS.

On April 28 Mr. Hind discovered, at Mr. Bishop's Observatory, a star of between the fourth and fifth magnitude, near Bessel xvi. 962, where none was noticed on April 5th. Its light in the telescope is remarkably vivid; the apparent position, April 28, was

R.A. 16h 51m 1·24s  Dec. −12° 39′ 12″·2

To the naked eye, the new star appears as bright as ν *Serpentis*. It is on the line joining η and 20 *Ophiuchi*.

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*In reply to some inquiries, the Editor of the Monthly Notices wishes it to be understood that the President and Council are not at all responsible for that work, which is left to his management. The author of each communication is answerable for the facts or theories stated; no alteration being made, intentionally, in this respect. The only liberty taken is that of occasional retrenchment, when required by uniformity of arrangement or limited space; and every contribution, not obviously incorrect, is noticed, which is of an astronomical nature.*

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Erratum.—No. 5, p. 130, line 10, *for* November, *read* October.

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